Claims:

1.   A method for gathering messages and failure codes in a system including a processing tool having a tool controller and a front end component having a front end component controller, the method comprising the steps of:

    (a)   receiving the messages and failure codes from the front end component controller;

    (b)   filtering the messages and failure codes according to user defined criteria;

    (c)   storing the messages and failure codes filtered in said step (c) in a database; and

    (d)   presenting the messages and failure codes filtered in said step (c) over a network.

2.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) are received from a load port controller.

3.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) are received from an auto ID controller.

4.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) are received from a wafer handling robot controller.

5.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) are received from a pre-aligner controller.

6.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) are received from a minienvironment controller.

7.   The method according to claim 1, wherein receiving the messages and failure codes in said step (a) comprises receiving the messages and failure codes in real time.

8.   The method according to claim 1, wherein presenting the messages and failure codes in said step (d) comprises presenting the messages and failure codes in real time.

9.   The method according to claim 1, wherein presenting the messages and failure codes over a network in said step (e) includes providing access to the network by an Internet browser.

10.   The method according to claim 1, wherein presenting the messages and failure codes over a network in said step (e) includes (i) exporting messages and failure codes stored in said step (c) and (ii) generating a report that organizes the exported messages and failure codes into a user readable format.

11.   The method according to claim 10, wherein generating a report includes (i) defining which messages and failure codes stored in the database are relevant, (ii) defining a start date and time for the report, (iii) defining an end date and time for the report, (iv) gathering the relevant messages and failure codes from the database that are between the start date and time and the end date and time, and (iv) presenting the gathered messages and failure codes in a readable format.

12.   The method according to claim 1, wherein receiving the messages in said step (a) comprises receiving messages selected from a group consisting of (i) event messages, (ii) control messages, and (iii) configuration messages.

13.   The method according to claim 1, wherein presenting the messages and failure codes in said step (d) includes presenting the messages and failure codes over a wireless network.

14.   The method according to claim 1, wherein filtering the messages in said step (b) includes (i) storing the messages and failure codes temporarily in a local memory, (ii) selecting which messages and failure codes temporarily stored in the local memory will be stored the database, and (iii) forwarding the selected messages to the database.

15.   A data collection and diagnostic system, comprising:

       a processing tool having a plurality of front end components, each one of said plurality of front end components having a component controller adapted to send messages and alarm signals relating to the operation of said front end component;

a tool controller electrically coupled to each one of said component controllers, said tool controller adapted to monitor some of said messages and alarm signals received form said component controllers;

a data acquisition device electrically coupled to said component controllers, said data acquisition device adapted to monitor all of said messages and alarm signals received from said component controllers, and including:

a processor adapted to filter said messages and alarm signals received from said component controllers;

a database adapted to store said messages and alarm signals filtered by said processor; and

a network interface; and

a central computer electrically coupled to said tool controller and said network interface by a network.

16.   The system according to claim 15, wherein said plurality of front end components are selected from a group consisting of (i) a load port assembly, (ii) a wafer handling robot, (iii) a pre-aligner, and (iv) an auto ID system.

17.   The system according to claim 15, wherein said component controllers are selected from a group consisting of (i) a load port assembly controller, (ii) an auto ID controller, (iii) a wafer handling robot controller, (iv) a pre-aligner controller, (v) a minienvironment controller, and (vi) an AMHS controller.

18.   The system according to claim 15, wherein said network comprises a local area network.

19.   The system according to claim 15, wherein said network interface further provides an interface for wireless access to said database.

20.   A data collection and diagnostic system, comprising:

a processing tool having a plurality of front end components, each one of said plurality of front end components having a component controller adapted to send messages and alarm signals relating to the operation of said front end component;

a tool controller electrically coupled to each one of said component controllers, said tool controller adapted to monitor some of said messages and alarm signals received form said component controllers;

a data acquisition device electrically coupled to said component controllers, said data acquisition device adapted to monitor all of said messages and alarm signals received from said component controllers, and including:

a processor adapted to filter said messages and alarm signals received from said component controllers; and

a network interface;

a database adapted to store said messages and alarm signals filtered by said processor; and

a central computer electrically coupled to said tool controller, said network interface, and said database by a network.